“AN ANALYTICAL STUDY OF DAIRY FARM BUSINESS WITH REFERENCE TO NANDED DISTRICT OF MAHARASHTRA”.

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Submitted by

Deepa Keshav Sandve

Researcher

Under the Guidance of

Prof. (Dr.) D. M. Khandare

Professor

School of Commerce and Management

SWAMI RAMANAND TEERTH MARATHWADA UNIVERSITY, NANDED

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1) Introduction

India is well known agriculture country in the world. More than 70 percent Indians depend on agriculture. Farmers produce various seasonal crops, vegetables food grains fruits etc. to satisfy the hunger needs of the nation. While farming farmers face various natural as well as artificial problems affecting of the production and get lower financial output after sell in the market and lower price of the production. So, the farmers do dairy farm as supplementary source to fulfil financial needs of the family where as they get milk a complete food for human beings as energy product from buffalos and useful for making by-products like curd, butter, ghee, sweets etc.

Cattle plays significant role in the economic life of rural India. Their utility for the rural community is so high welfare to our mother and father welfare to our cows so said Atharva Veda, the cattle have been contributing to prosperity to rural India. There is reference of cow and cowherds in Rigveda also. Cow was also a medium of exchange and treated as money. In the Up-nishadas also there are references of donating cows to the priestly class. In Mahabharat there is story of the war between arjun and Kaurawas for the cow herds of the king Virat, lord Krisha was also from the families of the milk producers and is therefore known as Gopal, Govind etc. in which go means cow. Animal labour account for 12% for the cultivation of corps animal dung used as fertilizer for about 6% of the cost of crop production is to be about 26 % . according to NSS estimates the national income in livestock is nearly 50% of total investment in all goods in the country.

Cattle is the basic single motive power of agriculture and without them, cultivation is difficult. They provide the milk and using milk more products from milk are prepared. Animal husbandry also contributes in the Indian national income near about 6 percent. The livestock contributed Rs 10864 crores in 1981-82 and its more than 17 percent of entire agriculture output. These animals dung also used in the agriculture for farming as organic fertilizer it costs above 4 percent of crop production in the country.

In 21st Century the advanced technology, industrialization and large productivity pull out the big number of people out from agriculture in the same it also creating high pressure on the agriculture and allied industries facing scarcity of farming labour. Agriculture and Agri-based industries are important for the country therefor it is necessary to take care of ago-based industries and ensure that rural population should not uprooted from villages. Only then the rural India may get the benefits of village facilities provided by the government and rural industries.

In India Agri-based industries are significant. These plays vital role in the nations socio-economic development. Which is the cornerstone in the worlds developing countries.

It is also a solution for unemployment for both literate and illiterate rural population a burning issue facing the country.

This is an attempt by the researcher to put forward an analytical study of Dairies in Nanded taluka of Nanded District of Maharashtra. The study also aims to present micro analysis of Dairies related with infrastructure, operations , finance position, human resource conditions, marketing conditions and government aid.

Dairy farms in India

Dairy sector of India comprises milk production, collection, processing, distribution and marketing , plays vital role in development of rural economy and boost for agriculture sector. *9Dairy is the fastest growing business in India considering the other world countries. Livestock sector contributes nearly 26 percent in case of overall rural income in case of poorest households and about 12 percent in case of overall rural income. Dairying provides a remunerative outlet for family labour, so farmers families are encouraged to take up dairying as an occupation subsidiary to agriculture. Other than income generation and livelihood security, dairying also ensures nutritional security for the family addressing issues like malnutrition. Studies show that households owning milk animals in rural areas consumes almost three times more milk than the families which are not into dairying, Indian dairy sector is uniquely characterised more by production by masses rather than mass production. Contrary to leading milk producing countries in the world nearly95 percent of milk producers in the country hold only one to five animals per household.

Milk production in India has come a long way over the years from a l ow volume of 55.6 million tons in 1991-92 to 176.3 million tons in 2017-18 at an average growth rate of 4.5 percent. but, due to various socio-economic factors, there exist wide inter-state variability in milk production. While the per capita availability of milk is 375 grams per day at all India level, it varies between 70 grams per day in assam to 1120 grams per day in Punjab, with Record production and 1.3 billion population, India is the world's largest producer and consumer of milk accounting for nearly 19 percent of worlds milk production most of the milk production comes from over 125 million milch animals that are generally reared under poor conditions lacking scientific requirements. No wonder, Indian dairy sector is struggling with low productivity of animals which is estimated as 1806 kg per year, as against the world average of 2310 kg. but the

vast diversity population of cattle and buffaloes offers great prospects for increasing the milk production. India is blessed with a huge biodiversity of 43 indigenous cattle breeds and 12 Buff breeds which have survived over last hundreds of years. Hence, a strategy is under implementation to enhance the average productivity of select breeds.

At present national agriculture development board- NABD has initiated talk with the world bank and concerned government department to launch second phase of the plan. It will have a projected outlay of about Rs8000 crore. The second phase will primarily focus on developing milk processing infrastructure and establishment of milk quality testing equipment at critical points of procurements areas.

2) Statement and significance of the study

Indian market consists of several types of businesses. Some traditional and new in nature. Dairy farm business is a traditional one which provides food product in the form of milk for every person in the society. It is necessary to study financial status of Dairy farm business owners . to study the economic importance through business process , customer services & problems in business development.

Dairy farm, like all other forms of Agri-based industries, is rapidly becoming more highly commercialized and specialized. The side-line dairy enterprise on general farm is fact disappearing, as is the small dairy farm. the number of farms selling milk or cream has dropped an estimated 74 percent, whereas production of milk has increased to 0.7 percent. thus, while many small farms are disappearing, the number of large dairy farms is raising. Each in a long list of changes in the technology of milk production has made a contribution toward changing the way a farm is organized.

Dairy farm business plays vital role in providing milk to growing population of the country, also ensure animal protein with maintained diet . milch animals comprising – buffaloes and cows is the largest producer of valuable food in the form of milk and in this way also plays important role in improving the nutritional level in human body. Whereas the waste of these milch animals are also used in various industries for the production. It also contributes in creating employment opportunities to the literate and illiterate both the individuals even they do not have good educational background.

It is essential to study the status of the dairy farm business and problems of dairy farm business in Nanded talukas of Nanded district of Maharashtra.

Dairy farm in the region plays vital role in the production of milk and allied products.

Dairy farm provides highly quality food product . these milk and milk products provide high nutrition to human beings. Milk is nearly complete food supporting ester growth rate and is very important I the diet for growing children and elders.

Dairy animals require cheap roughages not utilized by human beings. In order to produce good quality of nutritional milk

At present India is the second-largest populated country in the world having young population at large in the same way health and employment are important factors for the people. Considering the health and employment Dairy farm cater the need of employment and quality food in the form of Milk which is the part of daily human life. Dairy farm provides quality food in the form of Milk and employment for village people of the nation so it necessary to study dairy farm Business in Nanded District of Maharashtra.

3) **Review of literature**

The review presents the past studies which includes books, articles and research studies. Such reviews related with the present studies are as follows

1.Par and Sen :- in their work entitled, " effect of four-time milking on the yield of cows" have studied the milk production by Tharparkar cows and the related issues. The work is published in Indian journal of veterinary science, the researcher has studied the frequency of milking and quantity of milk given by the animals at various intervals. They have studied the relationship between the frequency of milking and quantity of milk and established that there is positive relationship between these two.

2. Kohli & Aacharya :- in their valued study entitled, "relationship between service period & gestation in Haryana cows" published in Indian journal of veterinary science. The authors have studied the difference of milk output during the lactation period and the dry period of milk animals in Haryana state, the researcher has used coefficient of correlation as a measure of analysis.

3. Mellor and Ponteves (1964) :- in their esteem ed research work entitled, "Estimates and projections of milk production in India." Published in international agriculture development bulletin . the authors have accepted 1956 as the base year and studied the next 25 years. The study is related with the demand for milk and by-products of milk in the rural and urban areas of the country. The data given by national sample survey was used by the authors. The authors have also studied elasticity of demand for milk and milk products .

4. Puri and Bhopal Singh (1964) :- in their study entitled, "a study of the impact govt. milk supply scheme, Jabalpur city" have studied the economics of milk production of the Tharparkr, Sahiwal and red Sindhi breeds maintained at NDRI kernel. The regression equation to predict the feed cost per kg of milk on the basis of the characters for the three breeds were fitted and it was found that

feed cost could be reduced by one NP. For Tharperkar breed if the milk Yield could be increased by 80kg per lactation or days in milk decreased by 15 days or dry days reduced by 24, without affecting the milk yield or lactation length. Similar figure for Sahiwal and red Sindhi were 70 and 64 kg of milk or about 14 and 13 days in milk or 23 and 22days (30).

5. Goswami and Nayar (1865) :- in their valued research work entitled, "effect of season and off-season of calving of buffaloes on their first lactation milk yield" have studied the effect of season on yield of milk. The authors have concluded that the yield of milk in winter season is comparatively higher as compared to the same in summer season, The authors have emphasized on the first lactation of Indian cows and buffaloes.

6.Shardha D.P. (1967):- in their research work entitled, "effect of the month and season of calving on milk yield" have studied Indian cows and buffalos. They have studied the season of calving and its effect on milk production. The authors have taken a sample of first 4 calving for their study. The seasons were divided as summer (march to june), monsoon (july to October) and winter (November to February) . the authors have concluded that, animals whose calving falls in winter give more milk as compared to those whose calving in summer.

7. Balbir Singh (1968) :- in his research work entitled, "role of occupational pattern in household consumption " have used the data of national survey 15th time series data of demand for milk. The work is published in Indian economic review. However, the sample taken for the study is not sufficient. The researcher has not used statistical tests for the study. Technique of angel curve is used for analysis of elasticity of demand.

8. Iyengar, Jain and Shriniwasan (1968) :- in their valued research work entitled, "economics of scale in household consumption", have used the 17th series of national survey data. The study is related with madras and Uttar Pradesh

states. Demand for milk and milk products has been studied in this work. The authors have concluded that the demand for milk and milk ;products depend upon the level of the milk products useful for national planning commission.

9. Hanumant Rao (1969):- In his study entitled, "Indias surplus cattle – some empirical results" has made a study in Andhra Pradesh state. The author has studied income from the milch animals of milk and cow dung production. This is a comparative study. It studies the cow dung as a by-product . the researcher has used cob-dougls production for this study . The researcher has also studied the expenses on cattle feed and labour expenditure.

10. Bhattacharya and Mutra (1969) :- In their study entitled , "Analysis Of Engel Curves Based on N.S.S.Household budget data for 7^{th} to 22^{nd} rounds" have studied the demand for 14 products including milk and its By-products with the use of angel curve. The researcher have also used the durbin Watson statistical method. The paper was presented to Indian econometric conference. The researcher has also presented various conclusions regarding the issue.

11. Nightingale Ray W. (1969):- In his work entitled, "The Modernization Decision In Indian Urban Fluid Milk Markets", has studied the various aspects of modernization of dairy industry in India. A study has been made of demand and supply in the milk market from 1951 to 1971. The researcher has concluded that, there is a reduction in the per capita availability of milk In India . In 1951 it was 132 grams per head whereas in 1971 the same decreased to 100 grams per head. The reason for this is interpreted as the use of milk for by-products than consumption.

12. Jason De Groot (2011), the study was undertaken with the objective to determine value-added Dairy business in California is financially profitable. It is a common issue in dairy farming but there is not any proper method to measure

the effect of available value-added facilities. he used a method of highly recognized financial reporting including financial profitability.

4) OBJECTIVES OF THE STUDY

For the present study the researcher will study objectives as follows

1. To study the socio-economic status of Dairy farm business in Nanded District of Maharashtra.
2. To study the infrastructure status of dairy farms business in Nanded District of Maharashtra.
3. To study the technical and financial position of the dairy farm business in Nanded District of Maharashtra.
4. To study the cost benefits of the dairy farm business in Nanded district in Of Maharashtra.
5. To study the operational problems of dairy farm business in Nanded District of Maharashtra.
6. To study the government policies related to the Dairy farm and its impact on dairy farm business in Nanded district of Maharashtra.

5)HYPOTHESES

For the present study the researcher has set following hypothesis

1. Problems of infrastructure and finance are faced by Dairy farm business in Nanded district of Maharashtra.
2. Performance of dairy farm business is not satisfactory in Nanded district of Maharashtra.
3. Government Policies and its impact on Dairy farm business is not satisfactory in Nanded District of Maharashtra.

6) RESEARCH METHODOLOGY

For the present research work researcher will adopt following methodology for research

6.1) DATA COLLECTION

In present research work researcher will collect data in following two methods.

6.1.1.) PRIMARY DATA:

The study is based on the primary data, for the collection of primary data, the researcher will conduct field survey by means of visits and interviews for the purpose of collecting primary data and also adopt the following mediums for data collection.

- Observation,
- Questionnaire,
- Interview, etc.

6.1.2) SECONDARY DATA

Researcher will collect secondary data from the following resources.

- Research publications, Magazines, Newspapers, Websites, Reference books, Encyclopaedia, etc.
- Published data of various government agencies like Lidcom, DIC.

6.2) SAMPLING FOR RESEARCH:

In present research study researcher will adopt random sampling method for the selection of samples among the research field. This is because dairy farm business units are spread over the various Taluka of Nanded District. The universe of the Dairy farm is as shown in the tabl

Table No. 1.1

Universe of sample selection

Sr. No	No of Village	Taluka	Dairy farm			Total
			Big	medium	Small	
1	88	Nanded	296	514	608	1408
2	123	Loha	124	223	450	797
3	125	Khandhar	107	198	202	507
4	148	Hadgaon	98	149	378	625
5	151	Mukhed	87	178	516	781
6	54	Mudkhed	172	258	430	860
7	180	Kinwat	195	232	367	794
8	69	Himayatnagar	67	153	230	450
9	104	mahoor	82	199	343	624
10	65	Umri	168	294	378	840
11	54	Dharmabad	126	197	381	704
12	56	Ardhapur	21	371	588	980
13	106	Degloor	75	164	206	445
14	91	Naigaon	95	163	210	468
15	83	Biloli	216	302	346	864
16	80	Bhokar	61	208	328	597
						11744

Source: Primary data

Selection of sample

In the present research area, there are 16 talukas. The researcher will select 10% sample i.e., 1197 it is rounded up 1200 dairy farm will be selected by simple random sampling method, in these 16 talukas sample dairy farms are 236 Big Dairy farms, 377 are medium Dairy farms and 584 are Small Dairy farms in Nanded District.

Table No. 1.2

Compilation and sample size

Sr. No	Taluka	Dairy farm			Total
		Big	Medium	Small	
1	Nanded	30	52	62	144
2	Loha	14	24	48	86
3	Khandhar	15	25	21	61
4	Hadgaon	10	15	40	65
5	Mukhed	10	20	60	90
6	Mudkhed	20	25	44	89
7	Kinwat	25	40	50	115
8	Himayatnagar	13	30	25	68
9	Mahoor	10	20	35	65
10	Umri	20	25	35	80
11	Dharmabad	20	30	60	110
12	Ardhapur	15	25	34	74
13	Degloor	10	20	30	60
14	Naigaon	8	12	10	30
15	Biloli	12	8	20	40
16	Bhokar	4	6	10	20
Total		**236**	**377**	**584**	**1197**

Source: Primary data

6.3) USE OF STATISTICAL TOOLS:

The collected data will be properly classified, tabulated and analysed with the help of statistical tools if necessary.

1. Averages, Percentage. Ratio analysis
2. Statistical tabulations standard deviation, mean, chi-square test, regression correlation etc.
3. Graphs and Tables, etc.

7) SCOPE OF STUDY

In present research work researcher will study the dairy farm business in in Nanded district. Researcher will study 16 taluka places during research work.

8) LIMITATIONS OF STUDY

- Geographically the study is limited to the Nanded district only.
- Data will be collected in Marathi language later on it will be translated in English Language.
- Sample selection is one of the limitations of the study.

9) CHAPTER PLAN

Chapter I) Introduction

Chapter II) Research methodology and review of literature.

Chapter III) Profile of Dairy farm in Nanded taluka.

Chapter IV) Data analysis and interpretation.

Chapter V) Problems of Dairy Farm in Nanded District.

Chapter VI) Findings, conclusion and recommendations.

Sandve Deepa Keshav
Researcher

Prof. (Dr.) D. M. Khandare
Professor & Research Guide
School of Commerce & Mgt. Science
S. R. T. M. University, Nanded